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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/492,462	01/27/2000	Toru Yamada	016891/0807	9897

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT PAPER NUMBER

2674

15

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/492,462

Applicant(s)

YAMADA, TORU

Examiner

Abbas I Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections 35 U.S.C. 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (USPN 5289293) in view of Tonomura et al. (USPN 5323235).

Regarding claims 1, 8 and 15, Kato teaches about a picture element density apparatus including an image input interface (1) for inputting image data ; and a pixel density converting units (2, 3) for images which are suitably used for enlargement. See column 1, lines 6-10, column 5, lines 59-68, and column 6, lines 1-20. Kato also teaches selecting unit for selecting the output as well as a control unit (222) which reduces the number of line synchronizing signals based on a given conversion factor. See column 7, lines 45-53. Furthermore, Kato teaches enlargement steps and its determination with respect to a given conversion factor. See Fig 11A. Kato teaches about the ratio of black area and a method of increasing the ratio of black area in a converted image. See column, lines 44-51. However, kato does not teach picture data area sandwiched between the black areas. Tonomura on the other hand teaches aspect ratio conversion mechanism (36)

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including video signal generator (47) and compression controller (43) that produces the desired aspect ratio. See col. 5, lines 22-45 and Fig 6.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kato's converting apparatus to include Tonomura's aspect ratio conversion techniques. One would have been motivated in view of the suggestion in Tonomura that the aspect ration conversion techniques equivalently provide the desired picture data sandwiched between black areas. The use of aspect ration conversion helps picture setting and converting apparatus.

Regarding claims 2, 9 and 16, Kato teaches the reduction of lines to one half by reducing the number of lines related to signals which are the output. See Fig 6, and column 8, lines 44-54.

Regarding claims 3, 10 and 17, kato teaches the increase of reduction factor by increasing line buffers and flip-flops. Kato also teaches the line synchronizing signal control unit (302) which reduces the number of line synchronizing signals in accordance with a mode signal. See column 22, lines 46-51, and column 8, lines 32-43.

Regarding claims 12, 14, and 18, Kato teaches an image area determination including for black, n lines and m blocks. See column 20, lines 13-52, and Fig 34 (B-C).

Regarding claim 13, Kato teaches an n-bit comparator (89) performing binerization by comparing the output of register (88) with the output of converted pixel tone. See column 23, lines 24-26.

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Regarding claims 4 and 11, Kato teaches a multiplexer (111) which selects the length of the side from horizontal scanning direction enlargement. See column 12, lines 31-38, and Fig 14.

Regarding claims 5 and 19, Kato teaches that the original pixels are thinned out at a fixed ratio in order to reduce the number of original pixels. See column 1, lines 28-39.

Regarding claims 6-7, Kato teaches above average tones which are directly binarized using a fixed threshold level resulting in loss of thin lines in a converted image. Kato further teaches that the image output device is managed by CPU and half-tone image and binarized image can be separated from each other by the structure of the pattern. See column 18, lines 66-67, column 19, lines 1-9 and Fig 54.

Conclusion

2. The prior art made of record and not relied upon is considered to applicants's disclosure.

The following arts are cited for further reference.

U.S. Pat No. 4,953,025 to Saitoh et al.

U.S. Pat No. 5,754,707 to Knowlton

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3. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks


Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to crustal park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.



Abbas Abdulsalam

Examiner

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**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**